

# Changes in taste function related to obesity and chronic ear inflammation

March 21 2011

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Children with chronic inflammation of the middle ear can experience changes in their sense of taste, and these changes may be related to childhood obesity, according to a report in the March issue of *Archives of Otolaryngology – Head & Neck Surgery*.

Chronic otitis media with effusion is a persistent inflammation of the middle ear, in which effusion fluid is retained in the middle ear cavity. "Otitis media with effusion (OME) is a disease with a high incidence in childhood and is a common cause of hearing disturbances in children," the authors write as background information in the article. "Although most children have a good prognosis, 10 percent of affected children develop recurrent or persistent OME."

Il Ho Shin, M.D., of Kyung Hee University, Seoul, South Korea, and colleagues conducted a case-control study to evaluate the association between the taste threshold in patients with chronic otitis media with effusion (COME) and the relationship with body mass index. The authors hypothesized that changes in taste function may occur in children with COME and that such changes may be associated with body weight.

The researchers measured the taste thresholds of 42 children with COME who underwent insertion of a small plastic tube into the eardrum to keep the [middle ear](#) aerated, and a control group of 42 children without OME. Four standard taste solutions – sugar, salt, citric acid, and quinine hydrochloride – were used in chemical taste tests.

The authors found that children with chronic otitis media with effusion had a significantly higher body mass index (BMI) than those in the control group.

Test results showed taste thresholds on the anterior (front) part of the tongue were higher in children with COME than in the control group.

Chemical taste tests showed the thresholds of sweet and salty tastes were elevated for children in the COME group. The thresholds of bitter and sour taste were also somewhat higher in the otitis media group, but these differences were not statistically significant.

"These findings suggest an association between changes in taste and increased BMI in pediatric patients with COME," the authors conclude.

**More information:** Arch Otolaryngol Head Neck Surg. 2011;137[3]:242-246.

Provided by JAMA and Archives Journals

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